

DISPLAY CONTROLLER WITH SPREAD-SPECTRUM TIMING TO MINIMIZE
ELECTROMAGNETIC EMISSIONS

ABSTRACT OF THE DISCLOSURE

A display system is provided that reduces electromagnetic emissions of at least one frequency component of a signal in the display system. A signal that drives a display is modulated so that one or more frequency components of the driving signal are attenuated due to the modulation of the signal. In one embodiment, an LCD controller is adapted to provide a modulated row driving signal to an active matrix LCD. The input data source may be adapted to accommodate the modulated display driving signal. Alternatively, a FIFO buffer is used to buffer input data to accommodate the modulated display driving signal. In a further embodiment, a clock modulating circuit is provided to modulate the display driving signal without modifying the display controller. The display driving signal is a spread spectrum modulated version of a standard display driving signal wherein higher frequency components of the spread spectrum signal are attenuated compared to a non-modulated display driving signal without requiring filtering and without significantly reducing the driving signal frequency.